BLAST search against



Identify gene family

ClustalW comparison with SwissProt top hit



Demonstrates global

BLAST against nonredundant GPCR db



Demonstrates GPCR sub-

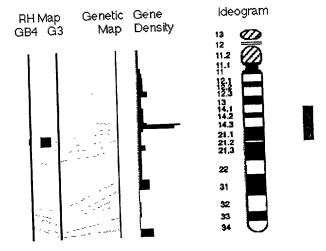
Figure 2

ClustalW Alignment of PFI-017 with Cysteinyl Leukotriene Receptor

1	70
PFI-017 (1) MEPNGTFENN-NERNCTIENFKREFEPIEYLEIFFWGVLGNGLSEYVFEQPYKKSESVEVEVENLA	SDL
Cyslt1 (1) MDETGNLTVSSATCHDTIDDFNQVYSTLYSMISVVGFFGNGFVLYVLTKTYHKKSAFQVYMINLA	ADL
Consensus (1) MD G S S TID FK F LY II G GNG IYV I Y K SA NVFMINLA	ADL
71	140
PFI-017 (70) LFISTLPFRADYYERGSNWFFGDLACRIMGYSLYVNWYSSIYFTIV SVVRFTAWYHPFRLEHYTS	Stude Wills
Cyslt1 (71) LCYCTLPLRVVYYYHKGIWEFGDFLCRESTYALYVNLYCSIFFMTAMSFFRCIAIVFPVQNINEVY)KKA
Consensus (71) L I TLP R YYL WIFGD CRI SYALYVNLY SIFFLT LS R TAIV P I L S	K A
141	210
PFI-017 (140) WIECGIWILINASSIMLLDSGSEQN-GSVTSCLELNLYKIAKEQTMNYIKLVVGCIIPFFTES	CYL
Cyslt1 (141) RFYCVGIWIFYILESSPFIMAKPQKDEKNNTKCFEPPQDNQTKNHWLVEHYVSLFVGFIIPFVIKI	CYT
Consensus (141) LC IWI II SS L A T C E K L L YIAL VG IIPF I	CY
211	280
PFI-017 (207) EIIRVLLKVEVPESGLRVSHEKAITTIIITLIIFICFIPHYHTLRTYHLTTWKVGLCKDREHK	V.IV
Cyslt1 (211) WIILTŁLKKSMKKNLSŚŁKKA GMINVVTAAFLWSFMPYHIQRT HLHFLHNETKPCDSVLRMO	CSVV
Consensus (211) LII LLK M SHKKAI III F L FLPYH RTIHL C RL	CALV
281 340	
PFI-017 (273) ITLALAANAČFNĒLLYTĒGENFKORLKSALRKGHPQKAKTKCVFPVSVWLKKĖTRV	
Cyslt1 (279) ITLELAASNCCEDPLLYEFSGGNFKKLS-TFRKHSLSSVTYVPRKKASEPEKGEEICKV	
Consensus (281) ITLALAAAN CF PLLYFFAG NFK RL RK SL K E	

Figure 3

5



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Figure 4

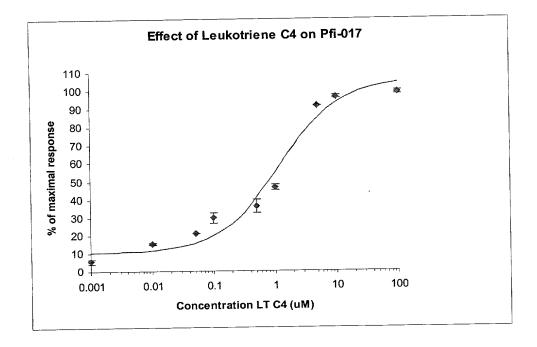
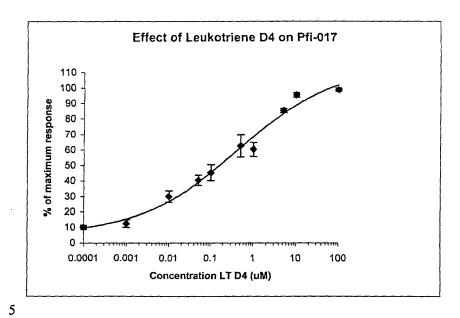


Figure 5



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Figure 6A

(SEQ ID NO: 1)

Figure 6B

(SEQ ID NO: 2)

Met Glu Pro Asn Gly Thr Phe Ser Asn Asn Asn Ser Arg Asn Cys Thr Ile Glu Asn Phe Lys Arg Glu Phe Phe Pro Ile Val Tyr Leu Ile Ile Phe Phe Trp Gly Val Leu Gly Asn Gly Leu Ser Ile Tyr Val Phe Leu Gln Pro Tyr Lys Lys Ser Thr Ser Val Asn Val Phe Met Leu Asn Leu Ala Ile Ser Asp Leu Leu Phe Ile Ser Thr Leu Pro Phe Arg Ala Asp Tyr Tyr Leu Arg Gly Ser Asn Trp Ile Phe Gly Asp Leu Ala Cys Arg Ile Met Ser Tyr Ser Leu Tyr Val Asn Met Tyr Ser Ser Ile Tyr Phe Leu Thr Val Leu Ser Val Val Arg Phe Leu Ala Met Val His Pro Phe Arg Leu Leu His Val Thr Ser Ile Arg Ser Ala Trp Ile Leu Cys Gly Ile Ile Trp Ile Leu Ile Met Ala Ser Ser Ile Met Leu Leu Asp Ser Gly Ser Glu Gln Asn Gly Ser Val Thr Ser Cys Leu Glu Leu Asn Leu Tyr Lys Ile Ala Lys Leu Gln Thr Met Asn Tyr Ile Ala Leu Val Val Gly Cys Leu Leu Pro Phe Phe Thr Leu Ser Ile Cys Tyr Leu Leu Ile Ile Arg Val Leu Leu Lys Val Glu Val Pro Glu Ser Gly Leu Arg Val Ser His Arg Lys Ala Leu Thr Thr Ile Ile Ile Thr Leu Ile Ile Phe Phe Leu Cys Phe Leu Pro Tyr His Thr Leu Arg Thr Val His Leu Thr Thr Trp Lys Val Gly Leu Cys Lys Asp Arg Leu His Lys Ala Leu Val Ile Thr Leu Ala Leu Ala Ala Ala Asn Ala Cys Phe Asn Pro Leu Leu Tyr Tyr Phe Ala Gly Glu Asn Phe Lys Asp Arg Leu Lys Ser Ala Leu Arg Lys Gly His Pro Gln Lys Ala Lys Thr Lys Cys Val Phe Pro Val Ser Val Trp Leu Arg Lys Glu Thr Arg Val

Figure 7A

(SEQ ID NO: 5)

Figure 7B

(SEQ ID NO: 6)

Met Glu Arg Lys Phe Met Ser Leu Gln Pro Ser Ile Ser Val Ser Glu Met Glu Pro Asn Gly Thr Phe Ser Asn Asn Asn Ser Arg Asn Cys Thr Ile Glu Asn Phe Lys Arg Glu Phe Phe Pro Ile Val Tyr Leu Ile Ile Phe Phe Trp Gly Val Leu Gly Asn Gly Leu Ser Ile Tyr Val Phe Leu Gln Pro Tyr Lys Lys Ser Thr Ser Val Asn Val Phe Met Leu Asn Leu Ala Ile Ser Asp Leu Leu Phe Ile Ser Thr Leu Pro Phe Arg Ala Asp Tyr Tyr Leu Arg Gly Ser Asn Trp Ile Phe Gly Asp Leu Ala Cys Arg Ile Met Ser Tyr Ser Leu Tyr Val Asn Met Tyr Ser Ser Ile Tyr Phe Leu Thr Val Leu Ser Val Val Arg Phe Leu Ala Met Val His Pro Phe Arg Leu Leu His Val Thr Ser Ile Arg Ser Ala Trp Ile Leu Cys Gly Ile Ile Trp Ile Leu Ile Met Ala Ser Ser Ile Met Leu Leu Asp Ser Gly Ser Glu Gln Asn Gly Ser Val Thr Ser Cys Leu Glu Leu Asn Leu Tyr Lys Ile Ala Lys Leu Gln Thr Met Asn Tyr Ile Ala Leu Val Val Gly Cys Leu Leu Pro Phe Phe Thr Leu Ser Ile Cys Tyr Leu Leu Ile Ile Arg Val Leu Leu Lys Val Glu Val Pro Glu Ser Gly Leu Arg Val Ser His Arg Lys Ala Leu Thr Thr Ile Ile Ile Thr Leu Ile Ile Phe Phe Leu Cys Phe Leu Pro Tyr His Thr Leu Arg Thr Val His Leu Thr Thr Trp Lys Val Gly Leu Cys Lys Asp Arg Leu His Lys Ala Leu Val Ile Thr Leu Ala Leu Ala Ala Ala Asn Ala Cys Phe Asn Pro Leu Leu Tyr Tyr Phe Ala Gly Glu Asn Phe Lys Asp Arg Leu Lys Ser Ala Leu Arg Lys Gly His Pro Gln Lys Ala Lys Thr Lys Cys Val Phe Pro Val Ser Val Trp Leu Arg Lys Glu Thr Arg Val